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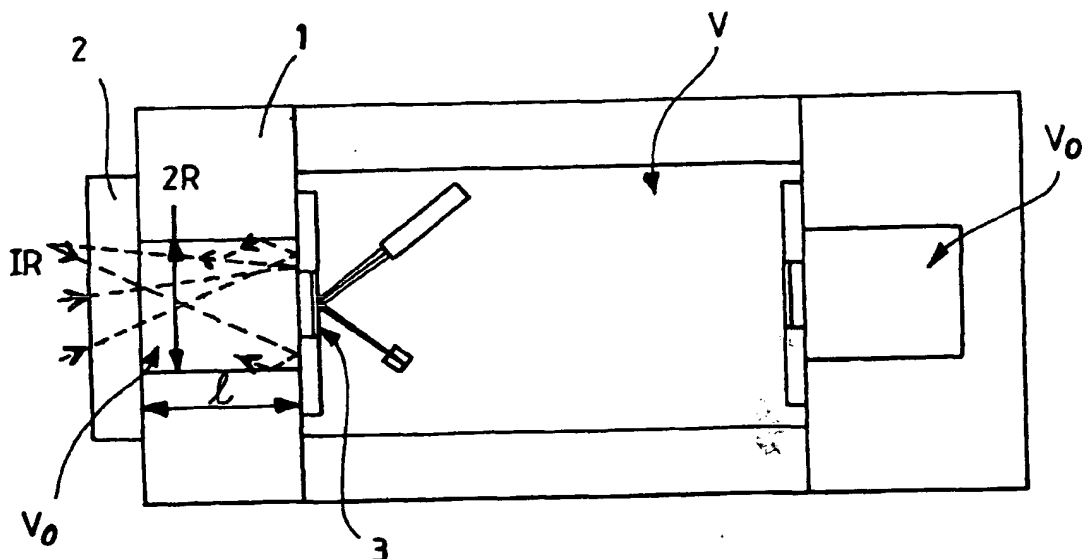
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(54) Title: PHOTOACOUSTIC DETECTOR



(57) Abstract: The invention relates to a photoacoustic detector, comprising at least a first chamber ( $V_0$ ) suppliable with a gas to be analyzed, a window for letting modulated and/or pulsed infrared radiation and/or light in the first chamber ( $V_0$ ), and means for detecting pressure variations created in the first chamber by absorbed infrared radiation and/or light. The means for detecting pressure variations created in the first chamber by absorbed infrared radiation and/or light comprise at least an aperture provided in the wall of the first chamber ( $V_0$ ), in communication with which is provided a door arranged to be movable in response to the movement of a gas, and means for a contactless measurement of the door movement. The invention relates also to a sensor for a photoacoustic detector and to a method in the optimization of a door used as a sensor for a photoacoustic detector.